

0044242

3306-SCU-063

## SDG Memo/Sample Summary

Client Name: WESTINGHOUSE HANFORD CO. Date: 10 Oct 1992  
 Project Name: SITE WIDE IV Update No.:  
 SDG No.: 3306 Work Order No.: 32359-42  
 Project Manager: J. DEWALD  
 Mail Date:

Client Samp No.	S-Cubed Samp No.	Date Rcvd	Date Samp	Matrix	ANIONS	FURN7000	HG7000	ICP6010	NO2/NO3	S	TALK	TC	TOC
BO6JC3	3306-01	9-11-1992	9-10-1992	SOIL	X	X	X	X	X	X	X	X	X
BO6JC3MS	3306-01MS	9-11-1992	9-10-1992	SOIL	X	X	X	X	X	X	X	X	X
BO6JC3REP	3306-01REP	9-11-1992	9-10-1992	SOIL	X	X	X	X	X	X	X	X	X

(X) = Non-Billable Sample



## ***NARRATIVE***

October 14, 1992

**Narrative Project:** Site Wide IV  
**Reference No.:** 32359-42  
**Client:** WHC  
**SDG No.:** 3306

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### **METALS**

The samples were analyzed according to EPA Methods 6010 and the 7000 series for the TCL metals and Mo. No dilutions were required.

The quality control results were generally acceptable. Several MS recoveries and duplicate RPDs are outside windows due to matrix. All other QC results are acceptable. Soil LCS results are within advisory ranges.

### **ANIONS**

The samples were analyzed according to EPA Method 300.0 for anions. For soil, 10 gm of sample was leached into 50 ml of DI Type II water prior to analysis. The quality control results were acceptable. %RPD and MS recoveries were within the control limits.

### **NO<sub>2</sub>/NO<sub>3</sub>**

The sample were analyzed according to EPA Method 353.3 for NO<sub>2</sub>/NO<sub>3</sub>. For soil, 10 gm of sample was leached into 50 ml of DI Type II water prior to analysis. The quality control results were acceptable. %RPD and MS recoveries were within the control limits.

### **SULFIDE**

The samples were analyzed according to EPA Method 9030 for sulfide. The samples were analyzed according to EPA Method 9030 for sulfide. For soil, 10 gm of sample was leached into 50 ml of DI Type II water prior to analysis. The quality control results were acceptable. %RPD and MS recoveries were within the control limits.

## ***NARRATIVE***

### **TOTAL ALKALINITY**

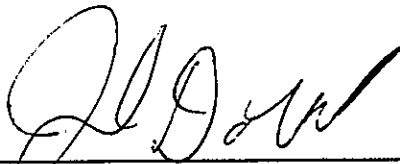
The samples were analyzed according to EPA Method 310.1 for total alkalinity. Due to high concentration, 1 gm of sample was leached into 50 Ml of DI Type II water prior to analysis. The quality control results were acceptable. %RPD and MS recoveries were within the control limits.

### **TOTAL CARBON**

The samples were analyzed according to EPA Method 9060 by combustion and then IR analysis. Prior to analysis, a sample aliquot was ground to a fine powder texture. The sample then went through the combustion and IR analysis process. The quality control results were acceptable. %RPD and MS recoveries were within the control limits.

### **TOTAL ORGANIC CARBON**

The samples were analyzed according to EPA Method 9060 by combustion and then IR analysis. Prior to analysis, a sample aliquot was measured and phosphoric acid was added to the soil. The mixture was placed in an oven at 70 C for one hour, then removed, cooled, and ground to a fine powder texture. The sample then went through the combustion and IR analysis process. The quality control results were acceptable. %RPD and MS recoveries were within the control limits.

  
\_\_\_\_\_  
John DeWald  
Project Manager

enclosures

"Next Day Delivery" "Signature Security" *glt's*

Contractor Westinghouse Hanford Co.	OFF-SITE PROPERTY CONTROL	CONTROL NUMBER (To be obtained from PROPERTY MANAGEMENT) W92-C-0622 #14
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PART I - TO BE COMPLETED BY ORIGINATOR

Department <i>Env. Rester. Eng.</i>	Section <i>Env. Remedial Actions</i>	Unit <i>—</i>
The following items are to be shipped from		<input checked="" type="checkbox"/> Contractor <input type="checkbox"/> Vendor
Routing <i>Emery</i>		<input checked="" type="checkbox"/> Contractor <input type="checkbox"/> Vendor
Shipped to <i>S-Cubed</i> <i>3398 Carmel Mt. Rd.</i> <i>SAN Diego, CA 92121-108</i>		Off-site Custodian <i>John Dewald</i>
		Full Title <i>—</i>

Quantity	Description (Include Serial and any Government Tag Numbers)	Original Cost
<i>1</i>  <i>19 lbs</i>	<i>Poly ice chest (RM#32) containing a glass sample container of soil packed in blue ice and vermiculite.</i>  <i>Sample # B06VC3</i>	

☐ Classified ☒ Unclassified ☐ Shipped Under DOE Contract ☐ Shipped Under Contractor's Use Permit Contract

Necessity for the Off-Site Use of this Property

*Program not available on-site.*

*Bill of Lading # 252156761 T*

RECEIVED

SEP 10 1992

CERTIFICATION OF THE RADIATION MONITORING RELEASE MUST BE SECURED THE SAME DAY THAT MATERIAL IS DELIVERED TO SHIPPING.


RM Clearance for Public Release <i>RC-10-92</i>	RM Survey No <i>910688</i>	Date <i>9-10-92</i>
Location of Property (Area & Bldg.) <i>#679-48-75</i> <i>Yakima Barricade Bldg.</i>	Contact <i>V.G. Lucas</i>	Phone <i>376-2789</i>
Date Ready for Shipment <i>610.3-613.2 ft interval</i> <i>9-10-92</i>	Cost Code to be Charged <i>PK1BB 81220</i>	Approximate Date This Property will be Returned <i>N/A</i>
Originated By <i>V.G. Lucas</i>	Date <i>9-10-92</i>	Authorized By <i>[Signature]</i>
Signature and Name of Property Control	Custodian Date <i>[Signature]</i>	Date <i>9-10-92</i>

PART II - TO BE COMPLETED BY SHIPPING

Signature of Recipient <i>[Signature]</i>	Return Order No.	Date Issued	Purchase Order No.	Date Issued
Date <i>9-10-92</i>	<i>1324</i>			

DISTRIBUTION

By Originator White, Green, Yellow, Pink - Property Management Goldenrod - Retain	Shipping Operation - Sign all Copies and Forward to: White - Property Management Green - Property Control Custodian (Issuing Office) Yellow - Retain Pink - Originator
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FORM OF PAYMENT				EMERY WORLDWIDE		A CF Company	
Check <input type="checkbox"/> CASH <input type="checkbox"/> <span style="float: right;">FCCOD <input type="checkbox"/></span>				<div style="font-size: 2em; transform: rotate(-15deg); display: inline-block;">93</div>		SERVICE <input type="checkbox"/> Express <input type="checkbox"/>	
Bill to Shipper <input checked="" type="checkbox"/> Bill to Consignee <input type="checkbox"/> Third Party Billing <input type="checkbox"/>						Delivery <input type="checkbox"/> Same Day (Extra Charges) <input type="checkbox"/> AM <input checked="" type="checkbox"/> PM <input type="checkbox"/> Second Day <input type="checkbox"/> Saturday Delivery <input type="checkbox"/>	
Shipper's Account Number <b>E 8502815A5</b>				Date <b>09-10-92</b>		Origin <b>PBC</b>	
From: <b>WESTINGHOUSE SHIPPING DEPT (509) 376-6665 U.S. DEPARTMENT OF ENERGY C/O WESTINGHOUSE HANFORD BLDG 1163 2335 STEVENS DRIVE RICHLAND WA</b>				To: <b>JOHN DEWALD S-CUBED 3398 CARMEL MT. RD. SAN DIEGO CA</b>		Tariff Dest. <b>T</b> Gateway <b>T</b>	
Customer's Reference Numbers <b>W01220 PK1BB W92-0-0622#14 99352</b>				Consignee's Account Number <b>E 92121-1095</b>		Hold for Pick Up <input type="checkbox"/> Canada <input type="checkbox"/>	
Description <b>1 ICE CHEST RM#32 SAIL SAMPLES # B06JC3</b>		Dimensions L <b>17</b> W <b>16</b> H <b>17</b>		Total Pieces <b>1</b>		Total Weight (lbs) <b>19</b>	
Remarks <b>OVERNIGHT DELIVERY SIGNATURE SECURITY SERVICE</b>		Zip Ship <input type="checkbox"/>		Mark if Emery Packaging is used Urgent Letter <input type="checkbox"/> Urgent Pack <input type="checkbox"/>		FOR INFORMATION OR RATES CALL 1-800 44 EMERY (1-800-443 6379)	
Shipper's Signature <i>[Signature]</i>		Third Party Account Number <b>E</b>		International Shippers Flat Domestic <input type="checkbox"/>		2521567617 	
Base Charge		International Customs Value		International Insurance		<div style="font-size: 4em; transform: rotate(-15deg); display: inline-block;">SAN-A</div>	
Total Transportation Charges		Other Charges/Advance at Origin <input type="checkbox"/> OCA/O-1 \$		Terms and Conditions on Back			

## U.S. EPA - CLP

1  
INORGANIC ANALYSES DATA SHEET

EPA SAMPLE NO.

3306-01

Lab Name: S\_CUBED\_\_\_\_\_ Contract: 32359-42\_\_\_\_\_

Lab Code: S3\_\_\_\_\_ Case No.: SWIV\_\_\_\_\_ SAS No.: \_\_\_\_\_ SDG No.: 3306\_\_\_\_\_

Matrix (soil/water): SOIL\_\_\_\_\_ Lab Sample ID: 3306-01\_\_\_\_\_

Level (low/med): LOW\_\_\_\_\_ Date Received: 09/11/92

% Solids: \_\_\_\_\_74.4

Concentration Units (ug/L or mg/kg dry weight): MG/KG

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum	23700	—	*	P
7440-36-0	Antimony	12.9	U	N	P
7440-38-2	Arsenic	1.8	B	N	F
7440-39-3	Barium	125	—	—	P
7440-41-7	Beryllium	0.81	B	—	P
7440-43-9	Cadmium	0.81	U	—	P
7440-70-2	Calcium	18200	—	—	P
7440-47-3	Chromium	17.5	—	*	P
7440-48-4	Cobalt	27.7	—	—	P
7440-50-8	Copper	26.1	—	—	P
7439-89-6	Iron	32800	—	—	P
7439-92-1	Lead	8.7	—	—	F
7439-95-4	Magnesium	8090	—	—	P
7439-96-5	Manganese	970	—	—	P
7439-97-6	Mercury	0.13	U	—	CV
7440-02-0	Nickel	18.5	—	—	P
7440-09-7	Potassium	4410	—	—	P
7782-49-2	Selenium	0.81	U	—	F
7440-22-4	Silver	4.0	—	N	P
7440-23-5	Sodium	209	B	—	P
7439-98-7	Molybdenum	2.7	U	N	P
7440-62-2	Vanadium	47.6	—	*	P
7440-66-6	Zinc	87.1	—	—	P
7440-28-0	Thallium	0.81	U	N	F

Color Before: \_\_\_\_\_ Clarity Before: \_\_\_\_\_ Texture: \_\_\_\_\_

Color After: \_\_\_\_\_ Clarity After: \_\_\_\_\_ Artifacts: \_\_\_\_\_

Comments:

B06JC3\_\_\_\_\_

FORM I - IN

7/88 002

## ANIONS ANALYSIS

PAGE 1 OF 1

LABORATORY: S-CUBED  
CLIENT: WHC  
PROJECT: SITE WIDE IV  
LOT #: 3306  
FILE #: ANI3306S  
DISK #: ANI0928  
METHOD NO.: 300.0  
UNIT: MG/KG

DATA REVIEWER: *un 10/7*  
PROJECT REVIEWER:  
CHARGE #: 32359-42  
DATE SAMPLED: 09-10-92  
DATE RECEIVED: 09-11-92  
PREP DATE: 10-02-92  
DATE ANALYZED: 10-02-92  
SAMPLE TYPE: SOIL

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LAB ID	F	CL	NO2	BR	NO3	PO4	SO4
3306-01	1.04	2.42	<0.3	13.8	2.92	<0.7	89.6

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*All GC requirement were acceptable. 10 gm of soil was leached into 50 mL DI H<sub>2</sub>O prior to analysis*

Comments: All qc requirement were acceptable. 10 gm of soil sample was leached into 50 mL prior to analysis.

S - CUBED

# Trace Inorganics Report

Client: WHC  
Project: SITE WIDE IV  
Sampling Date: 09-10-92

Analyst: EVA  
Review: CW 10/1  
Receipt. Date: 09-11-92

Analyte: S

[illegible]

Method Detection Limit: 1.000 mg/L  
Preparation Method: 9030  
Analytical Method: 9030  
Preparation Date: 09-15-92  
Analysis Date: 09-15-92

UN = Units = (A=mg/kg B=ug/L C=mg/L) MT = Matrix = (S=Soil W=Water)

Comments: all QC requirements were met. 10 gm of soil was leached into 50 mL prior to analysis.

S - CUBED

# Trace Inorganics Report

Client: WHC  
Project: SITE WIDE IV  
Sampling Date: 09-10-92

Analyst: CA  
Review: JN 10/1  
Receipt. Date: 09-11-92

Analyte: TALK

[illegible]

Method Detection Limit: 10.000 mg/L  
Preparation Method: 310.1  
Analytical Method: 310.1  
Preparation Date: 09-21-92  
Analysis Date: 09-21-92

UN = Units = (A=mg/kg B=ug/L C=mg/L) MT = Matrix = (S=Soil W=Water)

Comments: All ~~of~~ requirement were acceptable. One gram of soil was leached into 50 mL prior to analysis. 286

MAXWELL  
S-CUBED

ANALYTE: TC		CALIBRATION		QC SUMMARY			
METHOD REF.:	9060	STD 2000ppm	1993	MS	CONC	OBSERVED	%REC. ACCEPT.
DATE:	9/24/92	STD 400ppm	399.9	L C S	2000	1979	99 80-120
ANALYST:	MM	STD 10ppm	9.99				
MATRIX:	Soil	CAL BLANK	.097				

TOC CONC.=(TOC READING/2000)\*(0.08mg/0.00001kg)\*DIL.FACTOR  
FINAL CONC.=TOC CONC./1-(%MOIST.\*0.01)

SAMPLE ID. (S3)	TC READING	DIL. FACTOR	TOC CONC. (mg/kg)	%MOIS	FINAL CONC (mg/kg)	CLIENT SAMP.ID
EBS0924	0.245	1	0.24	0	0.00	
LCSS0924	1979	1	1979	0	1980	
3306-01	570.3	1	2281.2	25.56	3060	BO6JC3
3306-01REP	534.8	1	2139.2	25.56	2870	BO6JC3

**MAXWELL  
S-CUBED**

<b>ANALYTE:</b>	<b>TOC</b>	<b>CALIBRATION</b>		<b>QC SUMMARY</b>				
<b>METHOD REF.:</b>	<b>9060</b>	<b>STD 2000ppm</b>	<b>1993</b>	<b>CONC</b>	<b>OBSERVED</b>	<b>%REC.</b>	<b>ACCEPT.</b>	
<b>DATE:</b>	<b>9/24/92</b>	<b>STD 400ppm</b>	<b>399.9</b>	<b>M S</b>			<b>80-120</b>	
<b>ANALYST:</b>	<b>MM</b>	<b>STD 10ppm</b>	<b>9.99</b>	<b>L C S</b>	<b>2000</b>	<b>1979</b>	<b>99</b>	<b>80-120</b>
<b>MATRIX:</b>	<b>Soil</b>	<b>CAL BLANK</b>	<b>0.097</b>					

$\text{TOC CONC.} = (\text{TOC READING} / 2000) * (0.08 \text{mg} / 0.00001 \text{kg}) * \text{DIL. FACTOR}$   
 $\text{FINAL CONC.} = \text{TOC CONC.} / (1 - (\% \text{MOIST.} * 0.01))$

<b>SAMPLE ID. (S3)</b>	<b>TOC READING</b>	<b>DIL. FACTOR</b>	<b>TOC CONC. (mg/kg)</b>	<b>%MOIS</b>	<b>FINAL CONC (mg/kg)</b>	<b>CLIENT SAMP.ID</b>
EBS0924	0.245	1	0.245	0	0	
LCSS0924	1979	1	1979	0	1980	
3306-01	149.7	1	598.8	25.56	800	BO6JC3
3306-01REP	147.6	1	590.4	25.56	790	BO6JC3